REMARKS

Claims 1-7 and 28-63 are canceled without prejudice.

Claims 8 and 64 are amended to indicate that ink composition comprises less than 10 weight percent of an alkoxylated, radiation curable monomer comprising main-chain alkoxylated functionality. Support for this amendment is found, at least at, paragraphs [0013] – [0015] of the published application US2002/0086914.

New claims 65 and 73 read on the elected invention and are directed to the reactive diluent being substantially free of the alkoxylated, radiation curable monomer comprising main-chain alkoxylated functionality. Support for this amendment is found at least at, paragraphs [0054] –[0055] and all of the Examples of the published application US2002/0086914.

New claims 66 and 70 read on the elected invention and are directed to the ink jettable fluid composition has an elongation of at least 50% in a cured state. Support for this amendment is found at least at, paragraph [0031] of the published application US2002/0086914.

New claims 67 and 72 read on the elected invention and are directed to the reactive diluent being substantially free of trifunctional monomer having a plurality of radiation curable moieties. Support for this amendment is found at least at, Examples 1-11 of the published application US2002/0086914.

New claims 68 and 70 read on the elected invention and are directed to the reactive diluent comprises isobornyl (meth)acrylate, tetrahydrofurfuryl (meth)acrylate, and hexanediol di(meth)acrylate. Support for this amendment is found at least at, paragraph [0063] of the published application US2002/0086914.

New claims 69 and 71 read on the elected invention and are directed to the reactive diluent comprises comprises 30-50 wt% isobornyl (meth)acrylate, 30-50 wt% tetrahydrofurfuryl (meth)acrylate, and 5-15 wt% hexanediol di(meth)acrylate. Support for this amendment is found at least at, paragraph [0063] of the published application US2002/0086914.

New claims 74 and 75 read on the elected invention and are directed to the oligo/resin component being a di-functional moiety. Support for this amendment is found at least at, paragraphs [0044] and [0108] and the Examples of the published application US2002/0086914.

New claims 76 and 77 read on the elected invention and are directed to the oligo/resin component being an aliphatic urethane diacrylate. Support for this amendment is found at least

at, paragraphs [0063] and [0108] and the Examples of the published application US2002/0086914.

Claims 8-27 and 64-77 are pending.

Telephone Interview

Applicants thank the Examiner for conducting a telephonic interview on August 10, 2006 with Applicants' representatives Brian Whipps and Liz Gallo. Amendments discussed during that interview are presented herein.

35 USC § 103(a) Rejection

Claims 8-27 and 64 stand rejected under 35 USC § 103(a) as being unpatentable over WO 99/29787. Applicant respectfully submits that a *prima facie* case of obviousness has not been established because, at the very least, the reference does not teach or suggest all of the claim limitations of independent claims 8 and 64.

Claims 8 and 64 now recite that the ink jettable fluid composition has **less than 10 weight percent of an alkoxylated monomer comprising main-chain alkoxylated functionality**.

WO 99/29787 teaches compositions that include tri- or higher functional material, having main-chain alkoxylated functionality, chosen so that it is towards the upper end of the range of 10 to 30% by weight (see page 11 as cited by the examiner). All of the examples (except example 5) disclosed in WO 99/29787 have multi-functional material, having main-chain alkoxylated functionality, of at least 32 wt% (i.e., Actilane 430 (tri-functional) and Sartomer 306 (di-functional)). Example 5 includes 18.55 wt% multi-functional functional material having main-chain alkoxylated functionality.

WO 99/29787 teaches that if the total amount of these tri- or higher functional material in the ink is less than 10 % by weight, the properties of the print obtained from the ink, and in particular hardness and scratch resistance, may tend to suffer (see page 16 of WO 99/29787). WO 99/29787 further teaches that the total amount of tri- or higher functional material in the ink is preferably at least 15% by weight and more preferably from 20 to 30% by weight. Indeed, all of the examples include at least 25% of tri-functional material. Thus, one of skill in the art

would not be motivated to modify the teachings of this reference to include the tri- or higher functional at less than 10% since the express teaching of this reference teaches away from do so.

Contrary to the teachings of WO 99/29787, the claimed invention limits the alkoxylated monomer comprising main-chain alkoxylated functionality to less than 10 weight percent (and see claims 65 and 73, being substantially free of alkoxylated monomer comprising main-chain alkoxylated functionality). Applicants have discovered that the alkoxy or polyalkoxy moieties of such materials may have a tendency to oxidize over time (see paragraph [0054] – [0055] of the published application US2002/0086914). This impairs the performance of the resultant cured material, particularly if the alkoxylated functionality is situated in the monomer such that such functionality is positioned as part of a main polymer backbone when the compositions of the present invention are cured. These materials also are compatible only with a limited range of nonporous substrates (see paragraph [0054] of the published application US2002/0086914). Thus, limiting the presence of this material in the inventive ink jettable compositions have surprisingly improved the weatherability and durability of these inks.

Thus, Applicants assert that the *prima facie* case of obviousness has not been established since the cited reference does not disclose all the elements of the independent claims. Reconsideration is respectfully requested.

With regard to claims 67 and 72 that limits the reactive diluent so that it is substantially free of trifunctional monomer having a plurality of radiation curable moieties. Applicants assert that this claim positively recites claim elements. Applicants have found that limiting the amount of trifunctional monomer in the reactive diluent allows a cured ink to possess an elongation of 50% or greater. As noted above, the cited reference requires at least 10 wt% tri-functional material, and all of the examples of the cited reference includes at least 25 wt% tri-functional material.

With regard to the Examiners assertion that the cited reference discloses the claimed materials as preferred (notwithstanding the fact that at least one element is completely missing from the cited reference), Applicants point out that the cited reference teaches many materials as being preferred. None of the Examples disclosed in the cited reference combine the claimed materials as the Examiner has suggested. Only through reconstructive hindsight could the

Examiner suggest picking and choosing the materials from the material lists to arrive at the claimed materials.

Applicant respectfully requests withdrawal of the rejection of claims 8-27 and 64.

Double Patenting

Claims 8-27 and 64 stand rejected under the judicially created doctrine of double patenting. Applicant respectfully defers response to this rejection given the amendments to the claims.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

August 14, 2006
Date

By: _____
Colene H Blank, Reg. No.: 41,056
Telephone No.: 651-737-2356

Office of Intellectual Property Counsel
3M Innovative Properties Company
Facsimile No.: 651-736-3833